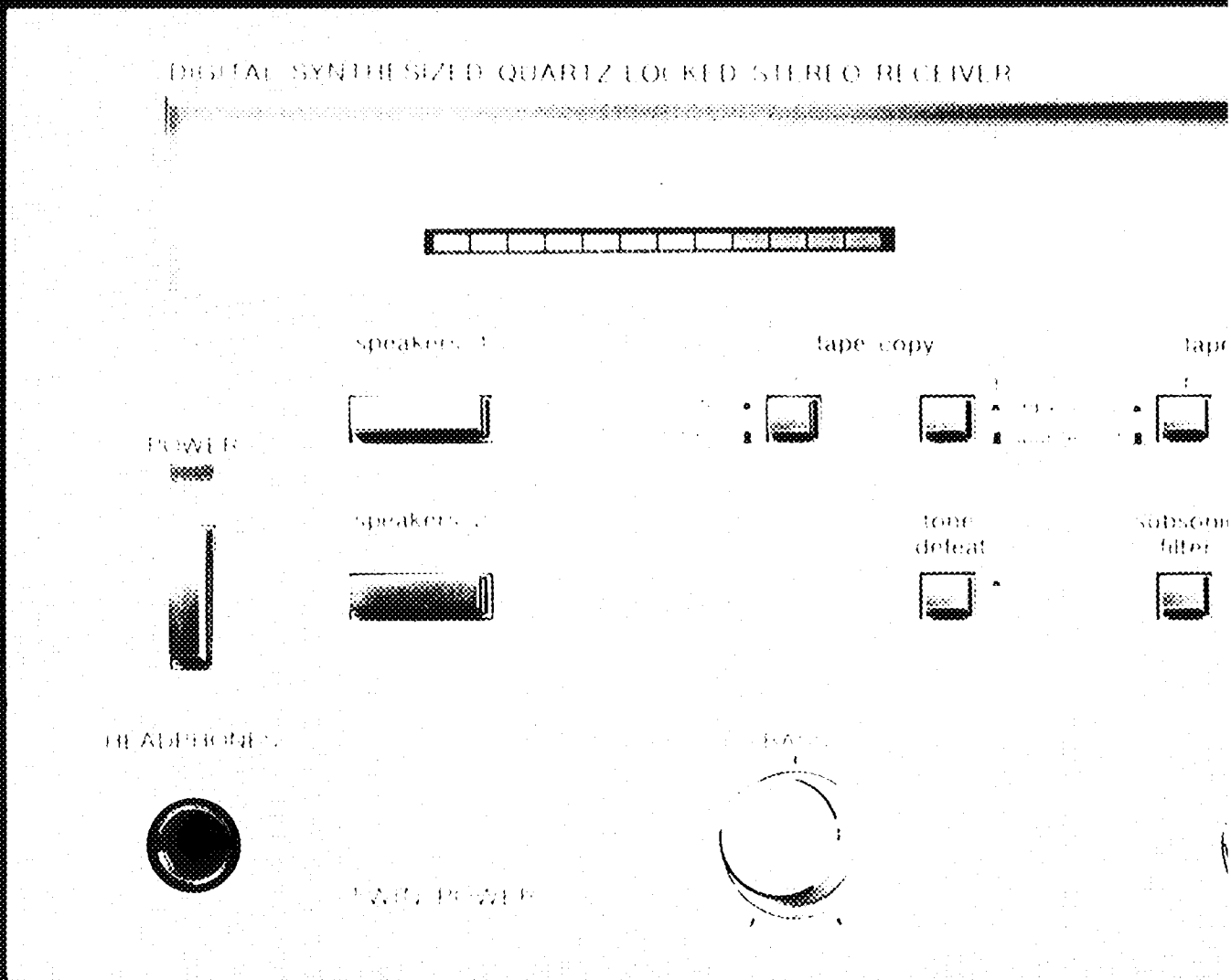
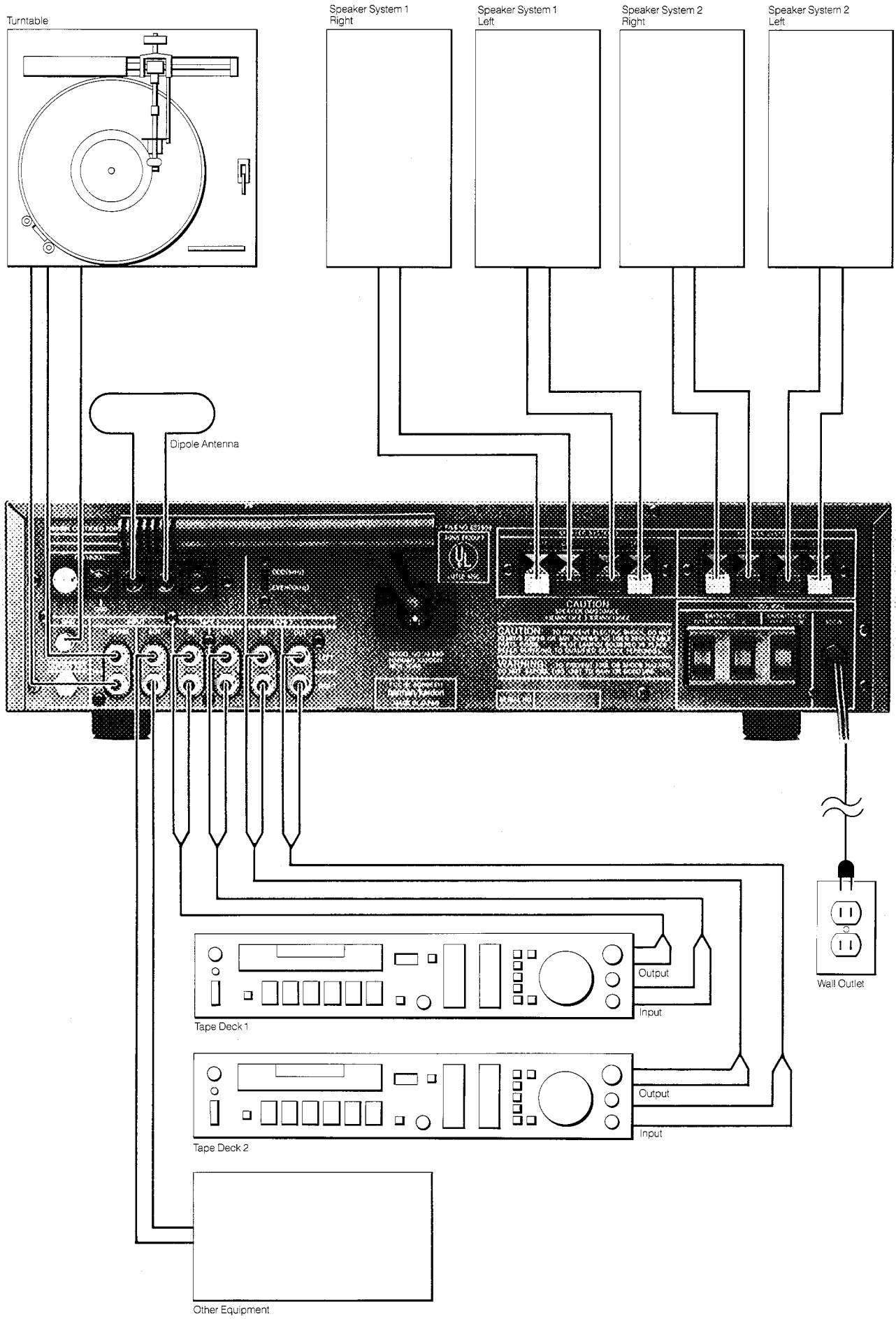
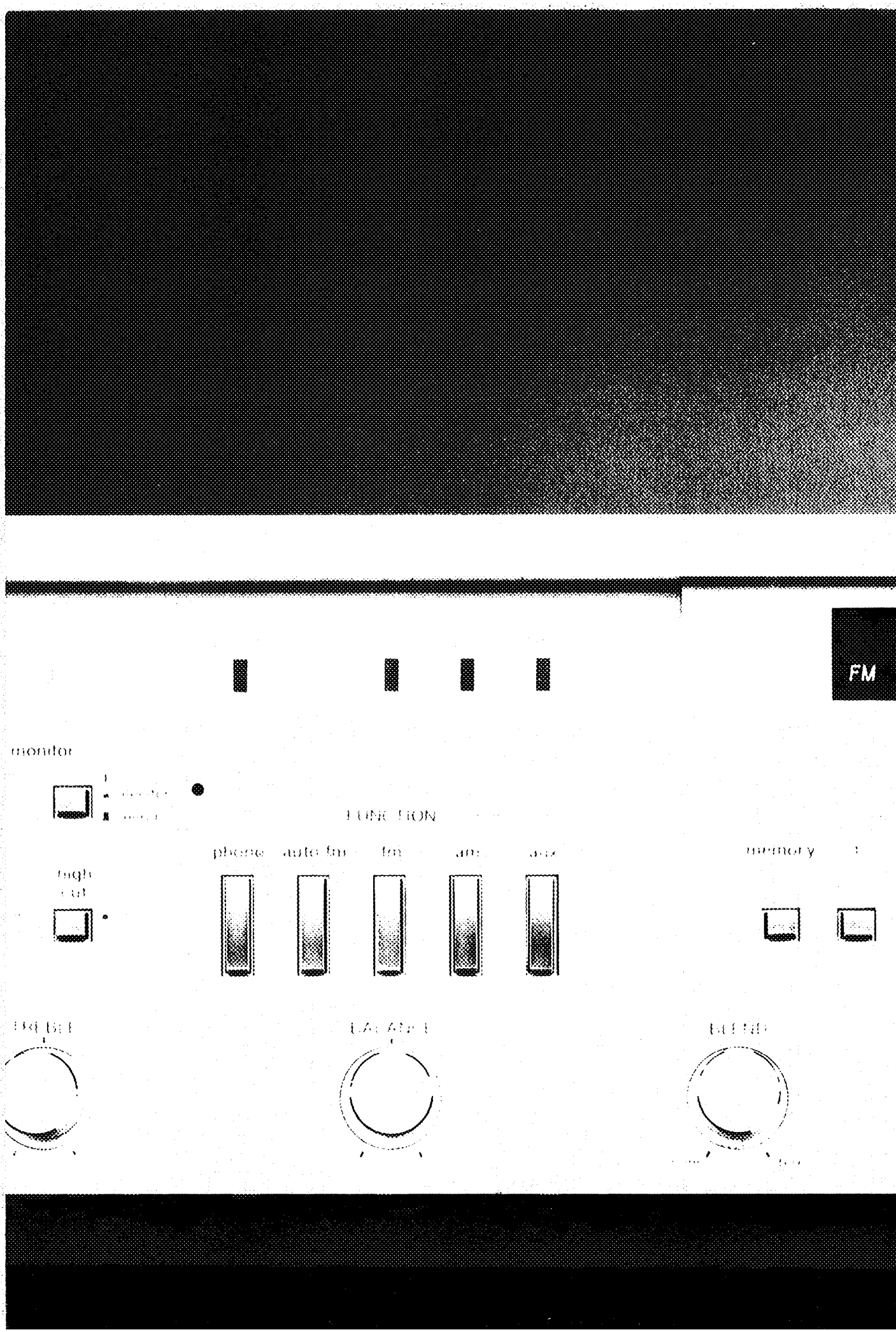
harman/kardon hk680i
owner's manual




Turntable
Speaker System 1 Right
Speaker System 1 Left
Speaker System 2 Right
Speaker System 2 Left
Dipole Antenna
CAUTION
Output
Input
Tape Deck 1
Output
Input
Tape Deck 2
Wall Outlet
Other Equipment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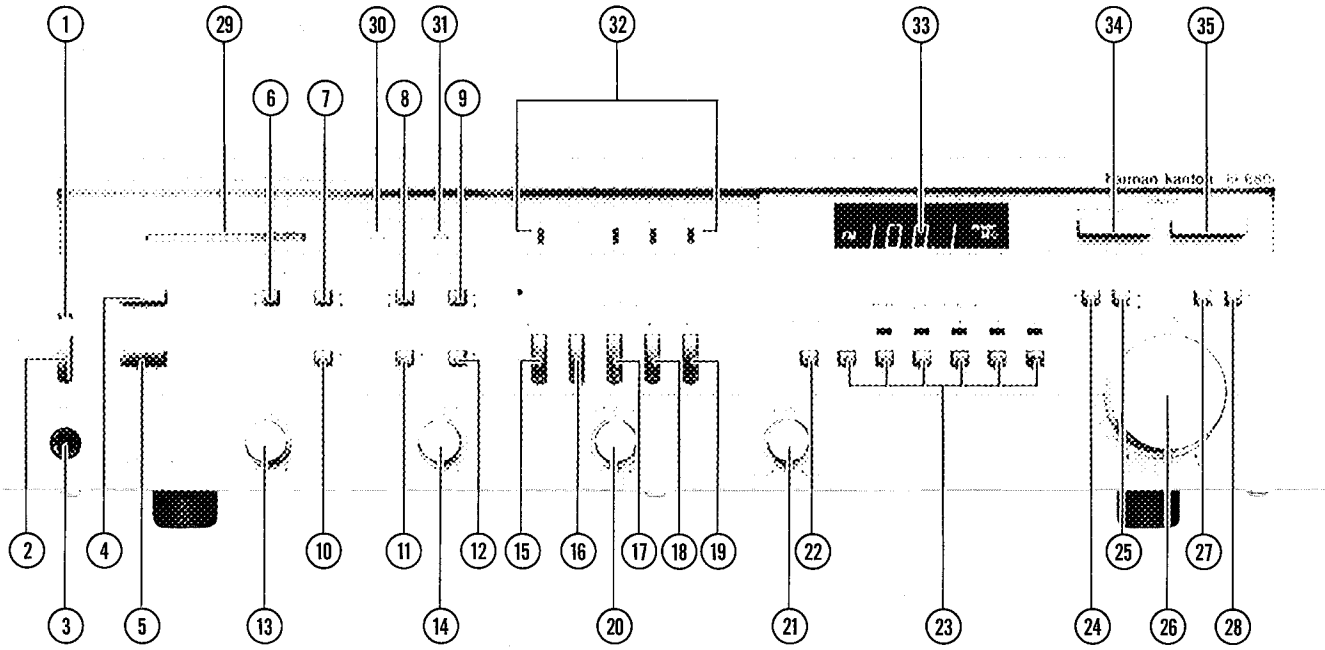
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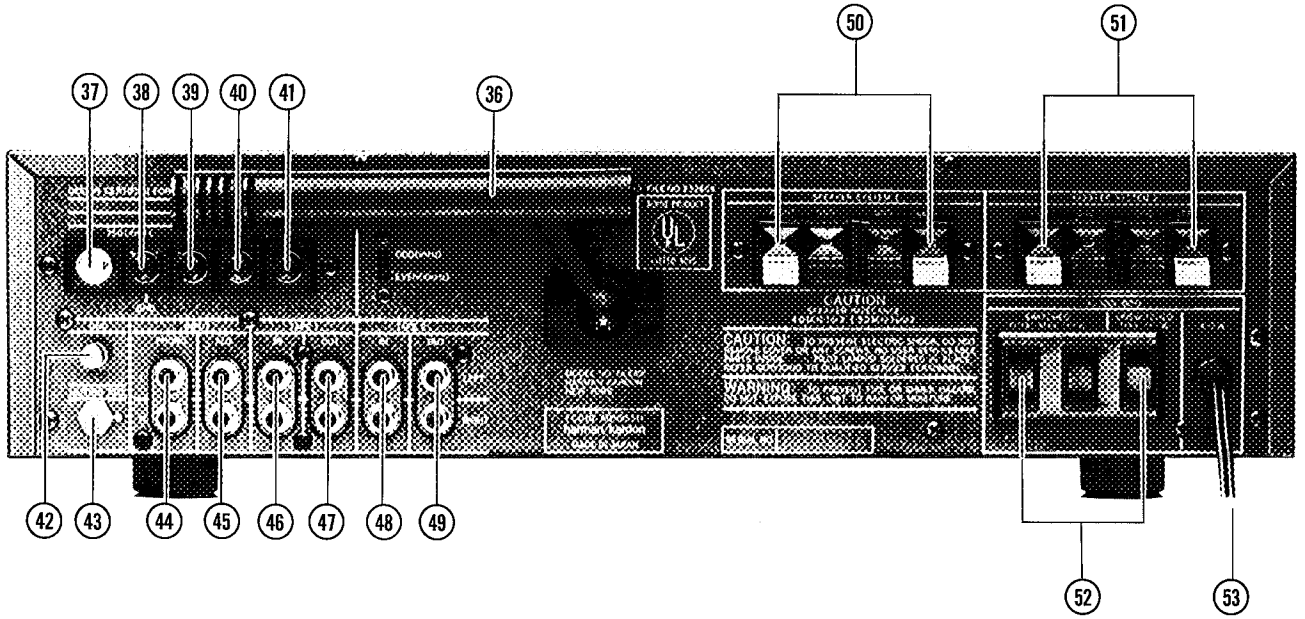
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Owner's manual hk680i

Your investment in a component high fidelity system indicates you have a more than average interest in music. The fact that your investment includes a Harman Kardon Ultrawideband Stereo Receiver shows us your appreciation of uncompromised reproduction of the music you enjoy. Throughout the design and manufacture of this unit, we made every effort to assure it will meet all of your expectations.

To ensure continuing high performance, read this manual carefully before you connect and operate your hk680i.

Warning

To prevent fire or shock hazard, do not expose this appliance to rain or moisture.

Warning

Do not mistake the ferrite loopstick AM antenna for a handle. Its bracket cannot support the unit.

Connections

For the moment, leave the POWER LINE CORD (53) of the hk680i unconnected. Put the unit on the shelf or table where it will be installed. Leave enough working space so you can make all connections easily.

The hk680i requires adequate ventilation. It should not be installed on a cushion or rug, and a minimum of two inches (5cm) clearance should be provided above and behind.

Like most stereo equipment, your hk680i is fitted with pin type RCA connectors to accept standard pin type RCA patch cords. If these are not compatible with your other equipment, consult your audio dealer for patch cords with proper adaptors.

Connecting your turntable to the hk680i

Turntables are supplied with their own signal cables. Consult the owner's manual and determine which cable is for the left channel and which is for the right channel. Insert the left channel cable into the left PHONO INPUT connector (44) on your hk680i. Insert the right channel cable into the right PHONO INPUT connector (44). Push the plugs in all the way so they are firmly seated, making good electrical contact.

If your turntable has a separate ground wire, connect it to the knurled thumbscrew on the receiver marked GND (42).

Connecting your tape decks to the hk680i

To connect a tape deck, connect the left output connector of your tape deck to the left TAPE 1 INPUT connector (46) on your hk680i. Now connect the right output connector of your deck to the right TAPE 1 INPUT connector (46) on your hk680i.

Using a second pair of patch cords, connect the left input connector of your deck to the left TAPE 1 OUTPUT connector (47) on your hk680i. Now connect the right input connector of your deck to the right TAPE 1 OUTPUT connector (47) on your hk680i. Push the plugs in all the way so they are firmly seated, making good electrical contact.

A second tape deck may be connected similarly using the TAPE 2 INPUT and OUTPUT connectors (48) (49).

Connecting other equipment to the hk680i

A pair of AUXILIARY INPUTS (45) is available at the rear of the hk680i for the connection of any "high level" output equipment. A special tuner for long wave, marine, aircraft or citizen's bands, etc., may be connected. Or you may choose to connect the output of the audio section of a television receiver. Any number of choices are available. Consult your audio dealer for information as to what equipment is compatible with your hk680i.

Connecting speakers

Use two-conductor stranded wire to connect your speakers to the receiver. Eighteen gauge lamp cord (zip cord) is satisfactory, but a heavier gauge (16 or 14 gauge) is preferable, especially for distances over 25 feet.

Cut two segments of wire long enough to reach each speaker. Separate the conductors at each end of the wire segments for a length of two to three inches. Then carefully remove about one-quarter inch of insulation from each free end. Twist the strands of each conductor so they are smooth and tight with no loose strands.

Lamp cord usually provides a "code" that differentiates the two conductors. A conductor may be coded by a rib, sharp corner, or indentations molded along the length of the insulation. In some cases, a thin colored thread is molded inside the insulation of each conductor. In others, one conductor is darker than the other, or the insulation of each conductor is of a different color. Connect the bare ends of one segment of lamp cord to your right speaker as follows: Connect the coded conductor to the speaker's positive ("+") terminal, and the uncoded conductor to negative ("–"). The "+" and "–" markings are in general use, although some speakers use other labeling systems, such as "1" and "2," "A" and "B" and so on.

Find the appropriate row of speaker connectors on the receiver marked SPEAKER SYSTEM 1 (50). Push in on the red plastic head of the connector marked RIGHT to reveal an opening beneath. Insert the bare end of the coded conductor into the opening. Release the connector. The conductor should now be locked firmly into place. Insert the uncoded conductor into the adjacent black connector marked GND.

Repeat the procedure for the left speaker, taking care to observe the coding of the conductors as described for the right speaker. If the code is followed as described, your speakers will be connected "in phase", which is important for solid bass and precise lateral location of the sound source. To connect a second pair of speakers, repeat the procedure for the right and left speakers of the second pair, using the receiver terminals marked SYSTEM 2 (51).

Connecting an AM antenna

A ferrite loopstick type AM ANTENNA (36) is provided and can be rotated to improve reception. If an external AM antenna is used, connect it to the terminal marked AM (41).

Connecting FM antennas

If no outdoor antenna is available, connect the lugs of the dipole (supplied with the unit) to the FM300Ω BAL terminals (39) and (40). The dipole can then be tacked or taped to a wall or the back of a shelf.

However, reception will be greatly improved if the receiver is connected to an outdoor FM antenna system. If you live in a fringe reception area, or if your house is situated among obstructions (such as mountains or tall buildings), you may need a more powerful, directional FM antenna.

To connect 300Ω (ohm) outdoor antenna wire, attach as described in the preceding paragraph. However, if your cable is 75 ohm, as is the case with many outdoor antennas, it will be round with either two protruding wires or a threaded coaxial connector. If the cable ends in bare wires, connect the wire that forms the outer mesh braid to the terminal marked FM 75Ω UNBAL GND (38). Connect the solid, copper-colored wire protruding from the center of the cable to the FM 300Ω BAL terminal (39). If your 75Ω cable has a threaded coaxial connector, fasten it on to the threaded antenna receptacle (37).

AC convenience outlets*

Three AC outlets (52) on the rear panel of the hk680i provide power connections for turntables, tape decks or other equipment. One is marked UNSWITCHED and provides power whether the receiver is turned on or not. Those marked SWITCHED provide power only when the receiver is turned on.

If you have completed the connections above, you are now ready to place the hk680i in its permanent position and plug the POWER LINE CORD (53) into an AC outlet. To turn the unit on and off, press the POWER switch (2). When power is on, the POWER indicator (1) will light.

To operate your hk680i

Speaker selection and headphones

The SPEAKER 1 (4) and SPEAKER 2 (5) switches select the pair of speakers to be played. When either switch is depressed, the corresponding pair of speakers is activated.

The front panel HEADPHONES jack (3) accepts headphones for personal listening. Headphones may be used simultaneously with speakers if desired.

To play records

Depress the PHONO pushbutton (15), activate your turntable, and advance the VOLUME control (26) clockwise to a comfortable level.

If you hear a hum at average listening levels, turn the POWER switch (2) off and check to see that phono and ground connections are secure.

*In some countries, owing to Safety Agency Electrical requirements, these AC receptacles are covered.

To listen to broadcasts

When you first turn on the power, the STATION DISPLAY (33) will automatically show "FM 88.10 MHz," the lowest FM frequency. To tune to an FM station manually, press the FM or AUTO FM pushbutton (17) (16) and place the TUNING button (25) in its MANUAL position (in). To scan to higher frequencies, press the TUNING UP button (35), releasing it when the desired frequency has been found. To scan to lower frequencies, press the TUNING DOWN button (34). During scanning, no sound will be audible at any time, even as you pass frequencies that contain broadcasts. This feature protects your audio system and loudspeakers from sudden high level signals. As you scan, the SIGNAL STRENGTH display (29) will help you locate broadcasts. To tune to an AM station, press the AM pushbutton (18), and follow the same procedure. The QUARTZ LOCK indicator (30) will light any time the receiver is properly tuned to any station. To scan automatically, place the SCAN STOP button (24) in its "off" position (out) and the TUNING button (25) in its AUTO position (out). When you press the TUNING UP button (34) or TUNING DOWN button (35), the 680i will automatically scan in the desired direction, stopping at each station to play several seconds of music. If the system is not disengaged by placing the SCAN STOP button (24) in its "on" position (in), the 680i will continue scanning and sampling until disengaged.

In its "on" position (out) the MUTING button (28) will automatically reject weak or distant stations that would give poor reception. To receive these stations, press the MUTING button (28) to its "off" position (in).

You can adjust the action of the muting circuit in your hk680i by using the MUTE ADJUST control (43) on the rear panel. The mute adjust is set at the factory so that you can receive the maximum number of stations. You may wish to alter the setting to mute some of the weaker and noisier FM stations by adjusting the MUTE ADJUST control (43) clockwise. When the MUTE ADJUST control (43) is turned fully clockwise, all but the strongest FM stations are muted.

When the AUTO FM button (16) is selected, the 680i will automatically shift into the mono mode when the signal is too weak for good stereo reception. To receive weak stations in mono (and reduce noise), press the FM button (17) instead.

FM/AM preset memory

Each of the FM/AM PRESET MEMORY buttons (23) on the hk680i can store one AM station and one FM station in memory for easy recall. Once registered in memory, these stations may be recalled simply by selecting either the AM or FM band with the function selector buttons, then depressing the proper FM/AM PRESET MEMORY button (23).

To register a station in memory, first locate the station, then press the MEMORY BUTTON (22). Press any of the 6 FM/AM PRESET MEMORY buttons, and when the light above the button lights, the station has been stored in memory.

To return to that station at any time, simply select the proper function (FM or AM) and press the appropriate FM/AM PRESET MEMORY button. Any time any of the FM/AM PRESET MEMORY buttons (23) is pressed, and the MEMORY button (22) is also pressed, the previously registered station will automatically be cancelled and the new one registered. Whenever the receiver is turned on, it will automatically tune to the last station you listened to, regardless of whether that station was registered in memory or not.

Note: If power to the 680i is cut for any reason, a battery backup system will activate to prevent preset stations from being cancelled from the memory. Momentary power cuts will not affect the memory. However we recommend that you do not connect the 680i to an outlet that may inadvertently be turned off. Otherwise excessive battery drain may occur.

Auxiliary equipment

If you have connected other equipment to the AUXILIARY INPUT connectors (45), you may listen to this program source by pressing the AUXILIARY pushbutton (19).

To play tapes

The TAPE MONITOR pushbuttons (8) (9) admit programs from tape decks connected to TAPE 1 INPUT connectors (46) and TAPE 2 INPUT connectors (48). When you wish to play a tape or program source connected to the TAPE 1 INPUT connectors (46), depress the TAPE MONITOR SOURCE/MONITOR pushbutton (9) to its MONITOR position (in) and place the TAPE MONITOR 1/2 pushbutton (8) in its TAPE 1 position (out). To play a tape or program from the TAPE 2 INPUT connectors (48), place the TAPE MONITOR SOURCE/MONITOR pushbutton (9) in the MONITOR position (in) and depress the TAPE MONITOR 1/2 pushbutton (8) to its TAPE 2 position (in).

To record tapes

The hk680i allows you to record programmed materials from any source selected by the function control pushbuttons (15) (16) (17) (18) (19).

Leave the TAPE COPY SOURCE/COPY pushbutton (7) in its SOURCE position (out). Activate the program source and place tape deck 1, tape deck 2 or both in record mode.

To listen to the original program, place the TAPE MONITOR SOURCE/MONITOR pushbutton (9) in its SOURCE position (out). To monitor the new recordings as they are being made, press the TAPE MONITOR SOURCE/MONITOR pushbutton (9) to its MONITOR position (in) and select the tape deck to be monitored with the TAPE MONITOR 1/2 pushbutton (1-out, 2-in) (8).

The VOLUME control (26), BALANCE control (20), and the various tone controls do not affect the signal at the TAPE OUTPUT connectors (47) (49). Hence you may change the settings of these controls without altering a tape recording in progress.

To copy tapes

When copying material from one tape deck to another, the TAPE COPY SOURCE/COPY pushbutton (7) should be pressed to the COPY position (in). To copy material from tape deck 1 on to tape deck 2, the TAPE COPY (1 to 2)/(2 to 1) pushbutton (6) should be in the "1 to 2" position (out). Put tape deck 1 in the play mode and tape deck 2 in the record mode.

To copy material from tape deck 2 onto tape deck 1, press the TAPE COPY(1 to 2)/(2 to 1) pushbutton (6) to the "2 to 1" position (in). Put tape deck 2 in the play mode and tape deck 1 in the record mode.

While copying material from one tape deck to another, you may listen to the original tape, the new recording, or any other program source selected by the function control pushbuttons (15) (16) (17) (18) (19). To listen to either tape deck, press the TAPE MONITOR SOURCE/MONITOR pushbutton (9) to its MONITOR position (in) and select the tape deck you wish to hear with the TAPE MONITOR 1/2 pushbutton (8). To listen to other program sources, leave the TAPE MONITOR SOURCE/MONITOR pushbutton (9) in its SOURCE position (out) and select the program source using the function control pushbuttons (15) (16) (17) (18) (19).

Volume, balance, loudness and tone controls

To increase the volume, turn the VOLUME control (26) clockwise. The BALANCE control (20) shifts the sound to one speaker or the other.

The BASS and TREBLE controls (13) (14) affect the frequency balance of the program material. Their neutral positions are at 12 o'clock. Turning the TREBLE control (14) clockwise increases the high frequencies. The BASS control (13) has the same effect on low frequencies.

When the LOUDNESS button (27) is in its "on" position (in), very high and very low frequencies are boosted at low settings of the VOLUME control (26). This compensates for the ear's relative insensitivity to extreme frequencies at low volume levels. The LOUDNESS button (27) has very little effect at volume settings beyond 12 o'clock.

Mono/stereo blend

The MONO/STEREO BLEND control (21) allows you to compensate for a variety of speaker placements. Ideally, the distance between the speakers should be about the same as the distance from the listener to a point midway between the speakers. Under these conditions, the MONO/STEREO BLEND control (21) should be in its full stereo position (full clockwise). If the distance between the speakers is substantially greater than the distance to the listener, stereo imaging may be improved by rotating the MONO/STEREO BLEND control (21) counterclockwise toward the mono setting.

Filters and tone defeat

The hk680i also incorporates three additional controls, a SUBSONIC FILTER (11), a TONE DEFEAT (10) and a HIGH CUT filter (12). Placing the TONE DEFEAT button (10) in its "on" position (in) eliminates the action of the BASS and TREBLE controls (13) (14) to allow for critical evaluation of their effect. Placing the SUBSONIC FILTER button (11) in its "on" position (in) engages a filter to protect your speakers from inaudible low frequency signals caused by severe record warp, acoustic feedback or tonearm resonance. Placing the HIGH CUT FILTER button (12) in its "on" position (in) minimizes "hiss" and other high frequency noises.

Maintaining appearance

Clean the metal panel with mild, diluted detergent applied with a soft cloth or cotton swab. Never use a strong abrasive cleaner.

Remove dust or smudges from the acrylic front window with diluted glass cleaner applied with a soft cloth. Do not use a strong solvent-type cleaner or ammonia.

The hk680i is a high quality precision instrument. If the instructions in this manual are followed thoughtfully, the receiver should provide many years of musical pleasure.

Note: In some areas, AM stations broadcast at frequency intervals of 10 kHz, in other areas at intervals of 9 kHz. Your 680i has been factory set for the frequencies in your area. However, if you find you cannot receive AM stations in your area, change the position of the switch on the back panel marked ODD 9 kHz/EVEN 10 kHz.

Congratulations

Your new Harman Kardon High Technology Receiver is now properly connected and ready to use. We hope you'll enjoy it for years to come.

If in the future you decide to add a cassette deck to your system, we hope you'll consider one of the new Harman Kardon High Technology Metal Cassette Decks. They're styled to be the perfect mates to our high Technology Receivers. In addition to being metal compatible, they also give you the all new Dolby HX headroom extension system for superb performance. Performance that can't be topped by anything less than a professional open reel deck.

Again, congratulations on your new receiver. With a little care, it will provide enjoyment for a long, long time.